

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P312706

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-RDP-CP187-W2A-U-3500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P312706
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L83050-RDP-CP187-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 3500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2221.0 lumens
Efficiency: N/A
Efficacy: 68.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

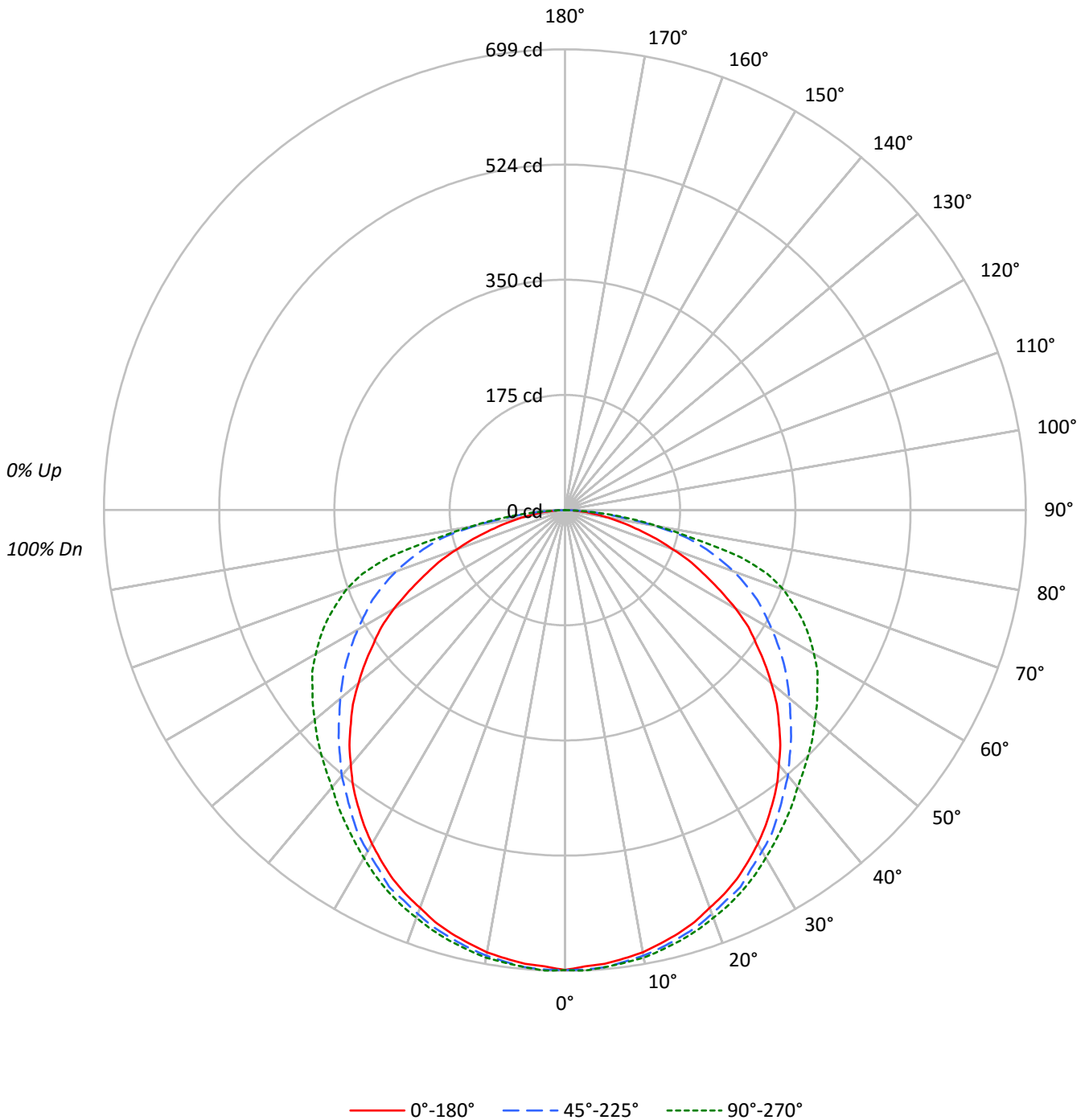
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312706

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-RDP-CP187-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P312706

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-RDP-CP187-W2A-U-3500K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1877	1877	1877
5°	1867	1880	1880
10°	1862	1875	1884
15°	1853	1871	1884
20°	1839	1867	1885
25°	1834	1873	1892
30°	1817	1858	1894
35°	1798	1852	1905
40°	1774	1848	1929
45°	1747	1847	1990
50°	1710	1860	2073
55°	1663	1901	2192
60°	1609	1952	2348
65°	1498	2050	2539
70°	1375	2147	2777
75°	1206	2259	2871
80°	1038	2152	2253
85°	908	1562	1717



TEST NUMBER: P312706

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-RDP-CP187-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.0	3.0
10°-20°	189.5	8.5
20°-30°	289.1	13.0
30°-40°	353.0	15.9
40°-50°	377.4	17.0
50°-60°	364.3	16.4
60°-70°	313.6	14.1
70°-80°	212.2	9.6
80°-90°	56.0	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	544.6	24.5
0°-40°	897.5	40.4
0°-60°	1639.2	73.8
0°-90°	2221.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2221.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	698	698	698	698	698	
5°	691	693	696	696	696	66
15°	665	667	672	675	676	188
25°	618	621	631	634	637	284
35°	547	552	564	575	580	342
45°	459	467	485	510	523	354
55°	354	366	405	446	467	318
65°	235	258	322	372	399	234
75°	116	154	217	261	276	124
85°	29	41	51	52	56	33
90°	0	0	0	0	0	



TEST NUMBER: P312706

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-RDP-CP187-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	697.7	697.7	697.7	697.7	697.7
2.5°	692.8	694.4	697.7	697.7	699.3
5°	691.1	692.8	696.0	696.0	696.0
7.5°	686.2	687.9	691.1	692.8	692.8
10°	681.3	683.0	686.2	687.9	689.5
12.5°	673.1	674.8	679.7	683.0	683.0
15°	665.0	666.6	671.5	674.8	676.4
17.5°	655.2	658.4	663.3	666.6	668.2
20°	642.1	645.4	651.9	656.8	658.4
22.5°	630.7	633.9	640.5	645.4	648.6
25°	617.6	620.9	630.7	633.9	637.2
27.5°	601.3	604.5	612.7	619.2	624.1
30°	584.9	588.2	598.0	606.2	609.4
32.5°	566.9	571.8	583.3	589.8	594.7
35°	547.3	552.2	563.7	575.1	580.0
37.5°	527.7	532.6	544.1	558.8	565.3
40°	504.9	511.4	526.1	545.7	549.0
42.5°	483.6	491.8	504.9	527.7	535.9
45°	459.1	467.3	485.3	509.8	522.8
47.5°	436.2	444.4	464.0	493.4	509.8
50°	408.5	419.9	444.4	478.7	495.1
52.5°	382.3	392.1	424.8	462.4	482.0
55°	354.5	366.0	405.2	446.0	467.3
57.5°	330.0	339.8	384.0	429.7	454.2
60°	299.0	312.1	362.7	411.7	436.2
62.5°	266.3	285.9	341.5	392.1	418.3
65°	235.3	258.1	321.9	372.5	398.7
67.5°	207.5	232.0	297.4	351.3	375.8
70°	174.8	205.9	272.9	325.1	352.9
72.5°	145.4	179.7	245.1	297.4	321.9
75°	116.0	153.6	217.3	261.4	276.1
77.5°	89.9	125.8	186.3	199.3	201.0
80°	67.0	99.7	138.9	140.5	145.4
82.5°	45.7	70.3	89.9	98.0	99.7
85°	29.4	40.8	50.6	52.3	55.6
87.5°	13.1	14.7	18.0	16.3	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)